



Year 5 Science Knowledge

Organiser: (Animals Including Humans)



Subject Specific Skills

- I can describe the changes as humans develop to old age.

Prior Learning

- Describe the simple functions of the basic parts of the digestive system in humans
- Identify the different types of teeth in humans and their simple functions
- Construct and interpret a variety of food chains, identifying producers, predators and prey

Key Knowledge:

- Pupils should draw a timeline to indicate stages in the growth and development of humans. They should learn about the changes experienced in puberty.
- The length of time that a person is expected to live is known as their life expectancy. Average life expectancy varies considerably around the world, ranging from 30 to 90 years. When calculating average life expectancy, many pieces of information are taken into consideration, including living conditions, death rates in the local population, how much money people have and what kind of community they live in.
- Scientists still don't know the exact recipe for a very long life, but thanks to improvements in living conditions and better healthcare, the human population as a whole is living longer than ever. In the United Kingdom, for example, it is estimated that one-third of the babies born in 2012 will live to be 100 years old.

Key Vocabulary

Oestrogen: The female sex hormone. Oestrogen causes the changes in a girl's body during puberty.

Puberty: The period during which an adolescent's body goes through a number of changes to become an adult capable of reproduction.

Testosterone: The male sex hormone. Testosterone causes the changes in a boy's body during puberty.

Key Individual: **Leonard Hayflick**



Key Knowledge:

- As we get older, our bodies gradually deteriorate. Our cells die and our joints and organs stop working properly. However, there are ways to slow down or fix some of this deterioration. It is possible to replace some joints with artificial ones made from metal or plastic, and some organs can be transplanted if a suitable donor is found.
- Puberty is the phase in the human life cycle when a child's body develops into an adult body that is capable of reproduction. It is triggered by the release of sex hormones – testosterone in men and oestrogen in women. Girls show the first signs of puberty around 11 years old and boys at around 13 years old.
- Growth accelerates at the onset of puberty and generally stops in the late teens. Girls generally start their growth spurt earlier than boys, but boys grow faster, which is why men are usually taller than women. Muscle bulk also increases, especially in boys. All this growth requires a great deal of energy, and this is reflected in a vastly increased appetite.

